"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITARZ, M.

SITARZ, M. How to install grounding and zero-phase sequence. p. 83

Vol. 8, no. 3, Mar 1956
PRZEGLAD KOLEJOWY ELEKTROTECHNICZNY
TECHNOLOGY
Warszawa, Poland

So: East European Accession Vol. 6, no. 2, 1957

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITARZ, M.

Control and measurement of vagrant current.

p. 145 (Przeglad Kolejowy Elektrotechniczny. Vol. 8, no. 5, May 1956. Warszawa, Poland)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

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KRYCHNIAK, Stefan, mgr inz.; SITARZ, Marian, inz.

The SW-type magnetic contactors for electric heating installations of cars of the Polish Railroads. Przegl kolej elektrotech 14 no.8:225-229 Ag '62.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

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CHURA,A.J.; SIKULA, L.; SITAY, S.; PRONAY, K.

Effect of aureomycin in acute rheumatism in children. Lek. listy, Brno 6 no.21:648-654 contd. 1 Nov 51. (CLML 21:4)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

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SITCHIKHIN, V.; OSIS, Z.; MARKHEL, I., red.; GRANT, V. [Grants, V.], tekhn. red.

[The seven-year plan of Latvia in operation] Semiletka Latvii v deistvii. Riga, Latviiskoe gos. izd-vo, 1963. 73 p. (MIRA 16:8)

(Latvia--Economic policy)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITDIKOV, B.S.

Gabbro-diabase and diabase in the Bondyuzhskiy region of the Tatar A.S.S.R. Uch.zap.Kaz.un. 120 no.4:31-42 '60. (MIRA 14:6)
(Bondyuzhskiy region -Diabase)

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ELLERN, S.S.; SITDIKOV, B.S.

Age and mode of occurrence of gabbro norites in Tatarstan and adjacent areas. Izv. AN SSSR. Ser.geol. 27 no.9:96-101 S '62. (MIRA 15:9)

1. Kazanskiy gosudarstvennyy universitet.
(Russian Platform--Hyperite)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

ELLERN, S.S.; PEN'KOV, I.N.; SITDIKOV, B.S.; VALEYEV, R.N.; MATYAYEVA, K.I.

Association of hydrothermal carbonate, bitumen, and sulfides in the Devonian of the northern part of the Kazan-Kirovo trough. Dokl.AN SSSR 145 no.5:1123-1126 '62. (MIRA 15:8)

1. Kazanskiy gosudarstvennyy universitet im. V.I.Ul'yanova-Lenina. Predstavleno akademikom N.M.Strakhovym.
(Kirov Province--Petrology)

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GORBACHEV, B.F.; SITDIKOV, B.S.; VLASOV, V.V.

Weathering crust on the crystalline rocks of the base of the northeastern part of the Tatar A.S.S.R. Dokl. AN SSSR 146 no.1:195-198 S '62. (MIRA 15:9)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina i Kazanskiy filial AN SSSR. Predstavleno akademikom N.M. Strakhovym.
(Tatar A.S.S.R.--Petrology)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

ELLERN, S.S.; VALEYEV, F..N.; SITDIKOV, B.S.

Some characteristics of the distribution of Devonian volcanic formations in the eastern part of the Russian Platform. Sov.geol. 6 no.8:66-77 Ag '63. (MIRA 16:9)

1. Kazanskiy gosudarstvenyy universitet.
(Russian Platform--Geology,Structural)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

VALEYEV, R.N.; SITDIKOV, B.S.

Geology of the crystalline bedrock in the Vyatka-Kama interfluve. Dokl. AN SSSR 152 no.6:1416-1419 O '63. (MIRA 16:11)

1. Kazanskiy filial AN SSSR i Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina. Predstavleno akademikom D.I. Shcherbakovym.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITDIKOV, B.S.; BORONIN, V.P.

New data on the structure of the basement and the interpretation of geophysical anomalies in the western part of the Tatar A.S.S.R. Dokl. AN SSSR 153 no.1:176-179 N '63.
(MIRA 17:1)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina. Predstavleno akademikom A.A. Trofimukom.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

GORBACHEV, B.F.; VLASOV, V.V.; SITDIKOV, B.S.

Characteristics of the formation of authigenous anatase in the katagenesis zone. Lit. i pol. iskop. no.5:105-108 S-O '64. (MIRA 17:11)

1. Kazanskiy gosudarstvennyy universitet.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

5(3)
AUTHORS: Pudovik, A. N., Sitdikova, F. N. SOV/20-125-4-38/74

TITLE: Addition of the Incomplete Esters of Phosphoric Acids to Nitroisoamylene and Ethyl-vinylsulfone (Prisoyedineniye nepolnykh efirov kislot fosfora k nitroizoamilenu i etil-vinilsul'fonu)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 4, pp 826-828 (USSR)

ABSTRACT: The authors continue their work (Ref) in the field of the addition of esters of various phosphorus containing acids etc to other compounds. It was of interest to extend the field of application of the mentioned reactions to the unsaturated nitro compounds and unsaturated nitrosulfones. This would facilitate a simple and convenient method of synthesis of nitrophosphinic- and sulfophosphinic esters which normally is either difficult or impossible (Refs 2-4). The catalysts were alcoholates of alkali metals without solvent. It was very easy to add dimethyl- and diethyl phosphoric acid to nitroisoamylene. In this connection a considerable amount of heat was produced. The reaction products are weakly smelling distillable liquids of a slightly yellow color. The addition of the ethyl ester of phosphono acetic acid to nitroisoamylene

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Addition of the Incomplete Esters of Phosphoric Acids to Nitroisoamylene and Ethyl-vinylsulfone

is more difficult. It requires considerable amounts of alcoholate and temperatures of 100-110° during several hours. A rather long induction period precedes the reaction. Table 1 shows the constants of the products obtained. Nitroisoamylene polymerizes only weakly in this connection. The experiments dealing with the addition of diethyl- and dimethyl thiophosphorus acid to furyl nitroethylene and ω-nitrostyrene in the presence of alcoholates of alkali metals as well as in the presence of organic bases, further the carrying out of the reaction in solutions in all cases led to a more rapid polymerization than it was the case with the addition reaction, in spite of the use of catalysts milder(piperidine and triethylamine) than alcoholates. It was not possible to isolate the addition products, and after a several hours heating at 80-90° only the initial products were isolated. It is well-known that certain nucleophilic reagents easily add to the double bond of unsaturated sulfones, in which connection various derivatives of saturated sulfones form. The addition products are distillable liquids or crystalline colorless substances, with a weak smell (Table 2). The reactions described

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Addition of the Incomplete Esters of Phosphoric Acids to Nitroisoamylene and Ethyl-vinylsulfone

in the present paper were carried out according to the method of reference 1. The reagents were used in equimolar amounts (1/20 - 1/30 mole). Thus, it was proved that the dialkyl phosphorous- and dialkyl thiophosphorous acids as well as the acid esters of alkylphosphinic acids in the presence of an alkali catalyst are capable of adding to the double bond of the α-unsaturated nitro compounds and sulfones. There are 2 tables and 4 references, 3 of which are Soviet.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina (Kazan' State University imeni V. I. Ul'yanov-Lenin)

PRESENTED: December 19, 1958, by B. A. Arbuzov, Academician

SUBMITTED: November 28, 1958

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITDIKOVA, R.G.

Roentgenological observations on the course and results of therapy of a pulmonary cyst. Sov. med. 23 no.3:77-78 Mr '59. (MIRA 12:4)

1. Iz rentgenovskogo kabineta sanatoriya "Vasil'yevo" (glavnyy vrach V.A. Ponomarev).
(LUNGS, cysts,
x-ray follow-up (Rus))

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITDYKOV, E.N.

Case of prolapse of a ureterocele through the orificium urethrae externum. Kaz. med. zhur. no.1:80-81 Ja-F'61 (MIRA 16:11)

1. Fakul'tetskaya khirurgicheskaya klinika im. A.V.Vishnevskogo (Zav.-prof. S.M. Alekseyev [deceased]) Kazanskogo med. instituta na baze Respublikanskoy klinicheskoy bol'nitsy (glavvrach - Sh. V. Bikchurin).

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SITDYKOV, E.N.

Suprapubic transvesical adenomectomy with a blind suture in the bladder by the Gel'fer-Blatnoi technic. Kaz. med. zhur. no.1:9-11 Ja-F '62. (MIRA 15:3)

1. Kafedra fakul'tetskoy khirurgii (zav. - prof. I.F. Kharitonov) Kazanskogo meditsinskogo instituta, na baze Respublikanskoy klinicheskoy bol'nitsy (glavnyy vrach - K.L. Svechnikov).

(PROSTATE GLAND—SURGERY)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITDYKOV, E.N.

Diagnostic significance of the determination of sialic acid and protein fractions in the blood serum in prostatic adenoma and pyelonephritis. Kaz.med.zhur. no.4:33-34 Jl-Ag '62. (MIRA 15:8)

1. Fakul'tetskaya khirurgicheskaya klinika (zav. - prof. I.V. Kharitonov) Kazanskogo meditsinskogo instituta na baze Respuclikanskoy klinicheskoy bol'nitsy (galvnyy vrach - K.L.Svechnikov).
(NEURAMINIC ACID) (BLOOD PROTEINS) (PROSTATE GLAND--TUMORS)
(KIDNEYS--DISEASES)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

BOLDIN, K.M. (Yaroslavl'); DROZDOVA, Z.S.; LEVIN, R.I.; VAYSMAN, L.A. (Kuybyshev-obl.); PODOSINOVSKIY, V.V.(Kazan'); SAYFULLINA, Kh.M. (Kazan'); BUSYGIN, N.V.(Kazan'); RAZUMOVSKIY, Yu.K.(Leninogrosk); GEL'FER, G.A., dotsent (Gor'kiy); MAMISH, M.G.(Kazan'); RAFALOVICH, M.B., dotsent; MEL'NICHUK, S.P., kand.med.nauk; KRAPIVIN, B.V.; STAROVEROV, A.T. (Saratov); SURIN, V.M.; POROSENKOV, V.S.(Romodanovo, Mordovskoy ASSR); ANDROSOV, M.D.(Moskva); ZARIPOV, Z.A.(Urussu, Tatarskoy ASSR); MURAV'YEV, M.F.(Izhevsk); KUZ'MIN, V.I.(Batyrevo, Chuvashskoy ASSR); SITDYKOV, E.N.(Kazan'); YUDIN, Ya.B.(Novokuznetsk)

Short reports. Kaz.med.zhur. no.4:81-91 Jl-Ag '62. (MIRA 15:8)
(MEDICINE--ABSTRACTS)

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AYDAROV, A.A., kand.med.nauk (Kazan'); SITDYKOV, E.N. (Kazan')

Fourth All-Union Conference of Urologists (June 24-30, 1961, Moscow). Kaz.med.zhur. no.4:109-111 Jl-Ag '62. (MIRA 15:8)
(UROLOGY--CONGRESSES)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITDYKOV, K.N.

Primary blind suture of the bladder in suprapubic adenomectomy as a method of choice. Kaz. med. zhur. no.6:34-36 N-D '63. (MIRA 17:10)

1. Kafedra fakul'tetskoy khirurgii (zav. - prof. T.F. Kharitonov) Kazanskogo meditsinskogo instituta, na baze Kazanskoy respublikanskoy bol'nitsy (glavnyy vrach - K.L. Svechnikov).

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITLYKOV, E.N.

Local novocaine anesthesia in operations on the organs of the small pelvis. Nauch. trudy Kaz. gos. med. inst. 14:545-546 '64. (MIRA 18:9)

1. Kafedra fakul'tetskoy khirurgii (zav. - prof. I.F.Kharitonov) Kazanskogo meditsinskogo instituta.

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HUNGARY

CSERNOHORSZKY, Vilmos, Dr, INCZE, Ferenc, Jr, Dr, SITKERI, Ivan, Dr; Medical University of Budapest, I. Surgical Clinic (Budapesti Orvostudomanyi Egyetem, I. Sebeszeti Klinika).

"The Use of a New Secretolytic Compound for the Prevention and Treatment of Postoperative Lung Involvements."

Budapest, Orvosi Hetilap, Vol 104, No 17, 28 Apr 63, pages 796-799.

Abstract: [Authors' Hungarian summary modified] The authors call attention to the importance of postoperative lung involvements. Since obstructive atelectasy is often caused by an increased bronchial secretion, the use of secretolytic drugs to facilitate expectoration is important. The surface active wetting agents decrease the viscosity of the mucus. Triton WR 1339 was used in 156 cases by the authors mainly in aerosol form, with very good results. Its use in all fields of surgery is strongly recommended. 2 Hungarian, 39 Western references.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

BOGDAN, Endre, dr.,; RADNAI, Bela, dr.,; SITKERY, Jozsef, dr.

Diverticulum of the female urethra. Orv. hetil. 96 no.44:1228-1229 30 Oct 55.

1. A Peterfy Sandor utcai Korhaz-rendelo Seveszeti Osztal. (foorvos: Sziklai Andor dr.) kozlem.

(URETHRA, diverticula, female urethra)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITKERY, Jozsef, dr.

5-year experience with dispensary treatment of renal tuberculosis. Tuberkulozis 13 no.4:120-123 Ap '60.

1. Az Urologiai Tbc Gondozo Intezet (vezeto foorvos: Szanto, Miklos, dr.) kozlemenye.
(TUBERCULOSIS RENAL ther.)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

BARNA, Laszlo, dr.; LEDER, Jozsef, dr.; SITKERY, Ivan, dr.; POMMERSHEIM, Ferenc, dr.

Postoperative aerosol therapy. Orv.hetil. 102 no.8:357-358 19 F'61.

1. Budapesti Orvostudomanyi Egyetem, I. sz. Sebeszeti Klinika.
(POSTOPERATIVE CARE)
(AEROSOLS ther)
(RESPIRATORY SYSTEM dis)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITDYKOV, G.A.

Packer for investigating absorption beds and injecting hardening muds into permeable beds. Burenie no.3:12-15 '64. (MIRA 18:5)

1. Ufimskiy neftyanoy nauchno-issledovatel'skiy institut.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITDYKOV, N.Kh., dots.

Late results of the surgical treatment of a congenital monstrosity of the type of xyphagus parasiticus in a 50-day old infant. (MIRA 11:3)
Akush. i gin. 33 no.6:91-94 N-D '57.

1. Iz kafedry urologii (zav.-dots. N.Kh.Sitdykov) Kazanskogo instituta usovershenstvovaniya vrachey imeni V.I.Lenina.
(MONSTERS, surg.
xyphagus parasiticus, follow-up)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITDYKOV, N.Kh., dotsent [deceased]; SITDYKOVA, E.N.

Metastatic melanoma of the neck of the bladder. Urologiia no.6: 66-67 '62. (MIRA 16:7)

1. Iz urologicheskoy kliniki (zav. - dotsent N.Kh.Sitdykov) Kazanskogo instituta usovershenstvovaniya vrachey imeni V.I. Lenina.
(METASTASIS) (MELANOMA) (BLADDER—CANCER)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITDYKOV, N.Kh., dotsent [deceased]; SITDYKOVA, E.N.

Metastatic melanoma of the neck of the bladder. Urologiia no.6: 66-67'62. (MIRA 16:7)

1. Iz urologicheskoy kliniki (zav. - dotsent N.Kh.Sitdykov) Kazanskogo instituta usovershenstvovaniya vrachey imeni V.I. Lenina.

(METASTASIS) (MELANOMA) (BLADDER—CANCER)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

PUDOVIK, A.N.; SITDYKOVA, F.N.

Addition of organophosphorus compounds with a mobile hydrogen to divinyl sulfone and p-di(β-nitrovinyl)benzene. Zhur. ob. khim. 34 no. 5:1682-1683 My '64. (MIRA 17:7)

1. Kazanskiy gosudarstvennyy universitet.

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SITDYKOVA, N.S.; TUROVA, N.Ya.; SEMENENKO, K.N.; NOVOSELOVA, A.V.

Compounds of beryllium chlorides with dialkyl sulfides. Zhur. neorg.khim. 6 no.11:2512-2516 '61. (MIRA 14:10)
(Beryllium chloride) (Sulfide)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

TUROVA, N.Ya.; SITDYKOVA, N.S.; NOVOSELOVA, A.V.; SEMENENKO, K.N.

Thermal decomposition of beryllium halide etherates. Zhur.neorg.-khim. 8 no.2:528-531 F '63. (MIRA 16:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Beryllium halides) (Ethers)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SLOTVINSKIY-SIDAK, N.P.; FEDOROV, P.I.; AKULKINA, L.M.; LOVETSKAYA, G.A.; SITDYKOVA, N.S.

Production of pure vanadium pentoxide from process solutions. Zhur. prikl. khim. 36 no.11:2367-2372 N '63. (MIRA 17:1)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

FEDOROV, P.I.; SITDYKOVA, N.S.

Removal of tin and lead impurities from indium by zone melting of its chlorides. Dokl. AN SSSR 153 no.1:126-128 N '63. (MIRA 17:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova. Predstavleno akademikom I.V. Tananayevym.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, A.

Affinity of polyamide fibers. p.343. (Textil, Praha, Vol. 9, No. 11, Nov. 1954)

SO: Monthly list of East European Accessions (EEAL), LC Vol 4, No. 6, June 1955, Uncl

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SIT[illegible]

Affinity of polyamide fibers. (Conclusion) p. 369. TEXTIL. (Ministr tvo lehkeho prumyslu) Praha. Vol. 9, no. 12, Dec. 1954.

SOURCE: East European Accessions List, Vol. 5, no. [illegible], September 1956

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, A.

H-34

CZECHOSLOVAKIA/Chemical Technology - Dyeing and Chemical Processing of Textiles.

Abs Jour : Ref Zhur - Khimiya, No 12, 1958, 41951

Author : Sitek
Inst : Bleaching of Polyamide Silone Fiber With Hypochlorous Sodium NaClO

Orig Pub : Textil, 1956, 11, No 8, 241-242

Abstract : A silone is bleached in a bath containing 0.5g. of free chlorine in one liter (pH 8.5) for one hour at 70-80°C. In case the desirable degree of whiteness is not reached the bleaching is continued with special attention given to the content of free chlorine, which should not exceed 0.5g/l. After the material has been bleached it is rinsed carefully and treated for 10 minutes at 60-70°C in a bath containing 1g/l of concentrated acetic acid, whereupon 1g/l of $Na_2S_2O_4$ (or any other reducer) is added and the material is treated for one hour at 70-80°C,

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[redacted], W., mgr. 1.2%.

Prospects for the application of combustion turbines for driving mechanical fighting vehicles. Przegl techn 86 no.18 ? 2 My '65.

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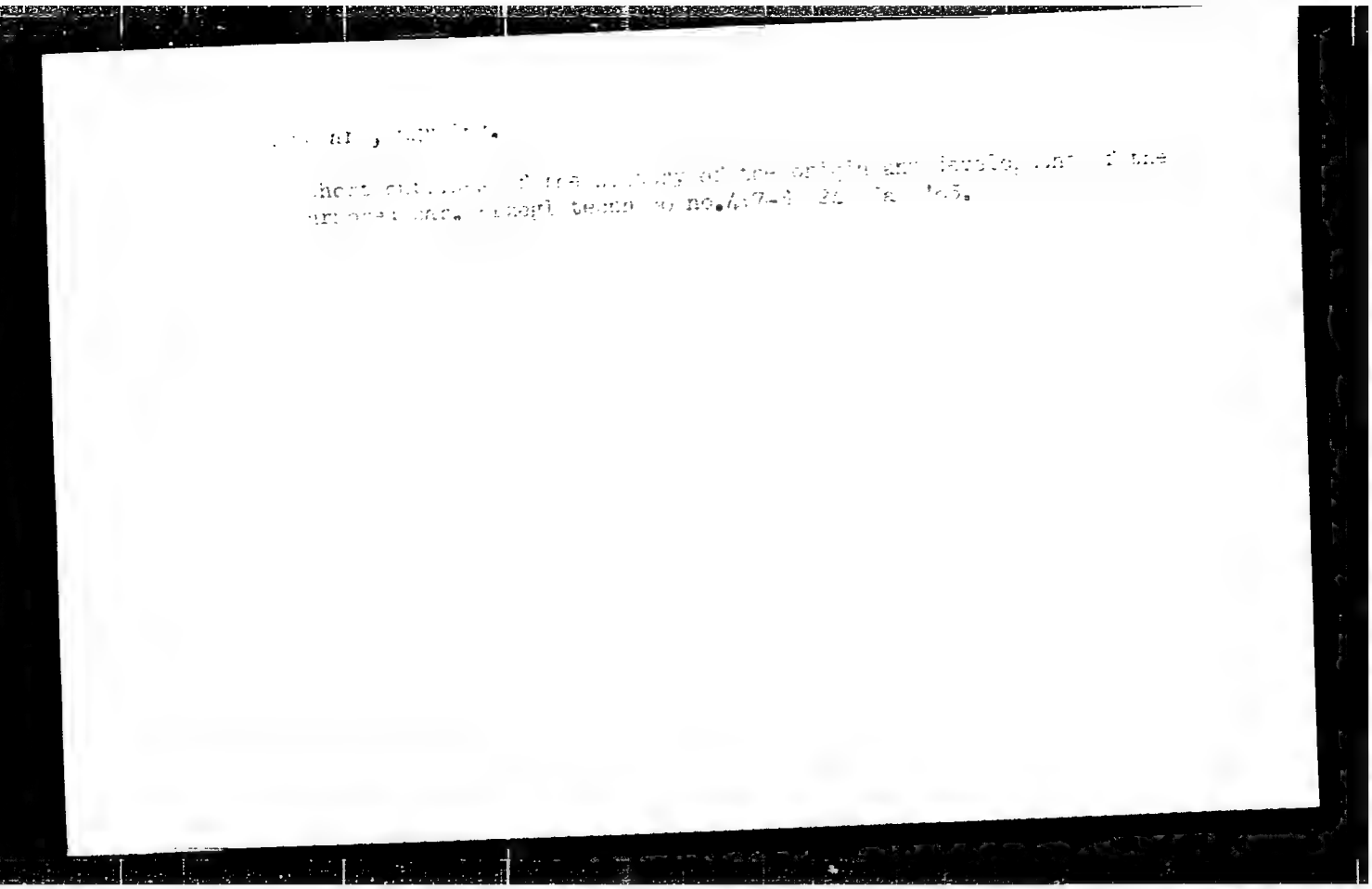

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, Edward, mgr inz.

Militarization of industries in western countries. Przegl techn 85 no. 4:6 26 Ja '64.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

ACCESSION NR: AP4012580 P/0005/64/000/006/0007/0007

AUTHOR: Sitek, Edward (Master of engineering)

TITLE: Soviet-Made Radiation Meters

SOURCE: Przeglad techniczny, no. 6, 1964, 7

TOPIC TAGS: Radiation detection, Gamma ray detection, portable radiactivity device

ABSTRACT: In 1963, the book, Zashchita ot Radioaktivnykh Osadkov (Protection from Radioactive Fallout), Petrov, R. V, Pravetskiy, V. N., Stepanov, I. S., and Shalnov, M. I., State Publishing House of Medical Literature, was published in Moscow. We are attempting to present readers of Przeglad Techniczny with excerpts from this work in several installments, to give them description of radiometers produced in the USSR.

This issue, we are presenting three types of radiometers: The Senezh is designed for detecting and measuring the degree of damage to the surface of objects by radioactivity, both on land and on sea, and to measure the intensity of gamma

Card 1/2

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ACCESSION NR: AP4012580

radiation in the location of a sonde.

The UR-4M radiometer is designed for measuring the intensity of gamma radiation. It is similar in design to the Senezh.

The RP-1 search radiometer is designed for finding radioactive sources under field conditions, and detects sources of gamma and beta radiation.

ASSOCIATION: None

SUBMITTED: 00	DATE ACQ: 03Mar64	ENCL: 00
SUB CODE: CO, SD	NO REF SOV: 001	OTHER: 002

Card 2/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, Edward, mgr. inz.

Militarization of the industry in Western countries.
Przegl techn 85 no.8:7 23 F '64.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITFK, Edward, mgr inz.

Short outlines of the history of the construction of tanks, Pt.2.
Przegl techn 86 no.9 28 F '65.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, Eligiusz, mgr

The birth of nautical psychology in Poland. Tech gosp morska 14 no. 4:106-108 Ap '64.

1. Polish Maritime Shipping Company, Laboratory of Sociology and Psychology, Szczecin.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

KOSMIDER, J.; SITEK, J.

Rationalization movement during the first half of 1962. Przegl techn no.47:7, 11 25 N '62.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SISTEK, J.

CZECHOSLOVAKIA

SISTEK, J., MD; POKORNY, J., MD.

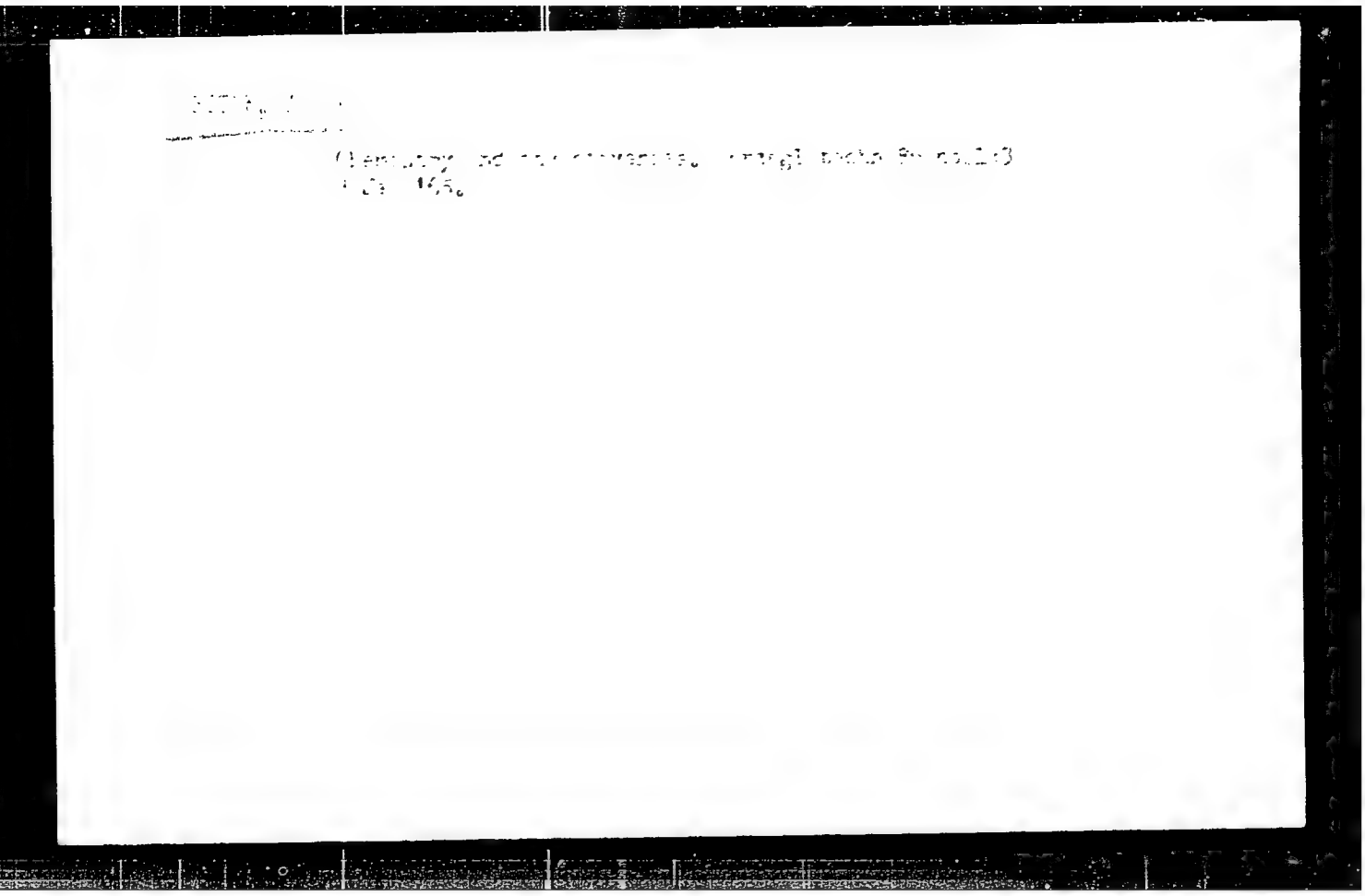
1. Third Gynecological-Obstetrical Clinic FDL of Charles University (III. gynekologicko-porodnicka klinika FDL KU), Prague; 2. Anestesiological Ward UVN (Anesteziologicke oddeleni UVN), Prague (for all)

Prague, Prakticky lekar, No 6, 1963, pp 217-219

"Resuscitation of New Born in the Delivery Room."

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2



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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, K.

(B)

Experiments with virus substrates. Nature of the "receptor gradient". A. W. Kozinski, E. Mikulaszek, and K. Sitek (*Bull. Acad. polon. Sci.*, II, 1953, 1, 31—36).—Viruses (mumps, Newcastle disease, influenza PR8 and Lee), on the basis of their elution from chicken, guinea pig, and human r.b.c. may be arranged in a series corresponding to the "receptor gradient". Using the r.b.c. of sheep the order of elution of the viruses is reversed and does not conform to the "receptor gradient". This finding is discussed

E. C. BUTTERWORTH.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

KOZINSKI, A.W.; MIKULASZEK, E.; SITEK, K.

Studies on the receptor gradient. Med. dosw. mikrob. 5 no.4:457-464 1953. (CIML 25:5)

1. Of the Institute of Medical Microbiology of Warsaw Medical Academy and of the State Institute of Hygiene in Warsaw.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

KURYLOWICZ, Wlodzimierz; KUZNIECOW, Anatol; SITEK, Krystyna

Comparative studies on lyophilized BCG cultures prepared from BCG strains of various origins. Gruzlica 24 no.7:259-268 July 56.

1. Z Panstwowego Zakladu Higieny w Warszawie Miedzynarodowego Osrodka Dziecka w Paryzu. Warszawa, ul. Chocimska 24.
(BCG VACCINATION, experimental,
comparison of vaccines prep. from various strains (Pol))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, K.

EXCERPTA MEDICA Sec 4 Vol. 10/9 Microbiology Sept 57

2247. KUZNIECOW A. and SITEK K. Zakł. Bakteriol. Państwowego Zakł. Hig., Warszawa. * Odczyn hemaglutynacyjny u świnek morskich uodparnianych szczepionką BCG płynną i liofilizowaną porównanie trzech szczepów BCG (Francuski, Duński, Brazylijski). Haemagglutination test in guinea-pigs immunized with fresh BCG vaccine and lyophilized BCG vaccine. Comparison of the three BCG strains: French, Danish and Brazilian GRUŹLICA 1956, 24/9 (925-932) Graphs 1 Tables 1

Investigations were carried out on the accumulation of haemagglutinins for chicken erythrocytes sensitized with tuberculin in guinea-pigs vaccinated either i. c. or s. c. with fresh BCG vaccine and with lyophilized BCG vaccine, prepared from 3 strains; French, Danish, Brazilian. The influence of old tuberculin administered i. c. in guinea-pigs on the increase of haemagglutinin titre was investigated. The findings show that a positive haemagglutination reaction appears in guinea-pigs vaccinated with either fresh or lyophilized BCG vaccine; and with repeated vaccination the titre for chicken erythrocytes sensitized with tuberculin increases; there are no differences between the fresh vaccine and lyophilized vaccine with regard to the development of haemagglutinins. The i. c. administration of vaccine containing 0.2 mg. of bacilli yields the same curve of increment of haemagglutinins as does the s. c. administration of 5 mg. of bacilli. The time of appearance and the curve of increment of haemagglutination titres were the same for the 3 strains used. The Brazilian strain yielded an inconsiderably higher haemagglutination titre than did the other 2 strains. Guinea-pigs given old tuberculin i. c. (even in large doses) did not develop the increment of serum haemagglutinin titre for chicken erythrocytes sensitized with tuberculin. (XV, 4, 17)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

MISIEWICZ, Janina i wspolpracownicy: RATYCKI, W.; BURACZEWSKI, O.; GACKOWSKI, J.; GURTAT, B.; KOBIERSKA, H.; KOZAKOW, H.; KRZYSZKOWSKA, A.; KURYLOWICZ, W.; KUZNIECOW, A.; MULLER, H.; RAFINSKI, T.; ROMANOWSKA, I.; SITEK, K.; STOPNICKA, M.; SZCZEPANAKI, W.; SZUSTROWA, J.; WIERZBOWSKA, M.; WIKTOROWICZ, J.

Early results of vaccination against tuberculosis with vaccines prepared from four different BCG strains. I. Gruzlica 25 no.3:243-250 Mar 57.

1. Z Instytutu Gruzlicy w Warszawie Dyrektor: prof. dr J. Misiewicz. Adres: Warszawa, ul Plocka 26.
(BCG VACCINATION, statist.
comparison of 4 strains (Pol))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

KURYLOVICH, V. [Kurylowicz, W].; KUZNETSOV, A.; PASKIYE, I.F.; SITEK, K.

Comparative studies on lyophilized BCG vaccines prepared from BCG strains of various origins. Zhur. mikrobiol. epid. i immun. 29 no.10: 109-116 O '58. (MIRA 11:12)

1. Iz Gosudarstvennogo instituta gigiyeny v Varshave i eksperimental'nogo otdela Mezhdunarodnogo tsentra pomoshchi detyam v Parizhe.
(BCG VACCINES
lymphilized vaccines from various strains, comparison (Rus))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, Krystyna

Studies on a hydrazide-resistant mutant of the subspecies "Moreau" of BCG. I. Stability of hydrazide-resistance. Med.dosw.mikrob. 13 no.2:151-158 '61.

1. Z Zakladu Bakteriologii PZH w Warszawie.

(MYCOBACTERIUM BOVIS pharmacol)
(ISONIAZID pharmacol)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, Krystyna

Studies on a hydrazide-resistant mutant of a BCG-Moreau subspecies. II. Immunogenic properties. Med.dosw.mikrob. 13 no.3:271-277 '61.

1. Z Zakladu Bakteriologii PZH w Warszawie.

(ISONIAZID pharmacol) (MYCOBACTERIUM BOVIS pharmacol)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

POLAND

SITEK, Krystyna, Department of Bacteriology (Zaklad Bakteriologii), PZH [Panstwowy Zaklad Higieny, State Institute of Hygiene] in Warsaw (Director: Prof. Dr. E. WOJCIECHOWSKI)

"Investigation of the INH-Resistant Mutant of the BCG Substrain Moreau. III. Virulence for Animals and Some Physiological Properties."

Warsaw, Medycyna Doswiadczalna i Mikrobiologia, Vol 15, No 3, 63, pp 207-216

Abstract: [Author's English summary modified] Compared with the original strain BCG Moreau from which it was derived, the INH-resistant mutant was less virulent to laboratory animals (guinea pigs and white mice), possessed no peroxydase activity, showed an increase rather than decrease in catalase activity with time, and showed production of the cord factor on microscopic observation of developed colonies. There are 26 references: 4 Polish, one each Soviet and German, and the others Western.

1/1

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

WALECKI, Henryk, and SITEK, Krystyna; Bacteriological Department, State Institute of Hygiene in Warsaw (head: Prof Dr E. WOJCIECHOWSKI)

"Immunogenic Power of Bordetella Pertussis and Leukocytic Reaction in Mice."

Warsaw, Medycyna Doswiadczalna i Mikrobiologia, Vol 18, No 2, 1966, pp 111-115

Abstract [authors' Russian and English summaries, modified]: Leukocytic reaction to intravenously injected B. pertussis suspensions, differing in their immunogenic power, was studied in mice. The bacterial suspensions as well as the pertussis endotoxin according to Westphal and soluble surface antigen were found to induce a temporary decrease in the leukocyte count, followed by an increase. The period of leukopenia was different when suspensions were used differing in their immunogenic power; it ranged from 4 to 36 hr. Suspensions with low immunogenic activity induced a short decrease and a subsequent rapid increase in the leukocyte count, neutrrphil leukocytosis being clearly pronounced. Suspensions with high immunogenic activity induced a prolonged leukopenia and a slower increase in the leukocyte count without distinct changes in the leukocyte pattern. The reaction was similar following an injection of soluble surface antigen. The method may be helpful in evaluating the immunogenic power of B. pertussis suspensions. 2 Soviet-bloc and 4 Western refs.

1/2

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, Wladyslaw; RAGO, Wlodzimierz; SLUSARCZYK, Boguslaw

Development and modernization of the economic administration units of power engineering in Polish metallurgy for the years 1966-1970. Problemy proj hut maszyn 13 no.4:103-109 Ap '65.

1. Biprohut, Gliwice.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

KOWALCZYK, Zygmunt; SITEK, Zbigniew

Accuracy testing of the objective of a photocamera. Geodezja AGH no.4:35-45 '63.

1. Department of Mining Survey, School of Mining and Metallurgy, Krakow.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, Zbigniew

Possibilities of using ordinary photocameras for accurate photogrametric works. Geodezja AGH no.4:109-129 '63.

1. Department of Mining Survey, School of Mining and Metallurgy, Krakow.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

CHRZA"OWSKI, Adam, mgr.,inz.; SITEK, Zbigniew, mgr.,inz.

Tests for applying photogrammetric methods for measuring the distribution of air currents in mines. Przegl gorn 17 no.12: 638-646 '61.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

KOWALCZYK, Zygmunt, prof.,dr.,inz.; SITEK, Zbigniew, mgr.,inz.

Prototype of a stereometric camera for mining purposes.
Przegl gorn 18 no.1:47-51 '62.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

S/035/62/000/011/050/079
A001/A101

AUTHOR: Sitek, Zbigniew

TITLE: New methods of direct determination of volumes of soil and rock masses from ground photographs

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 11, 1962, 14, abstract 11G110 ("Przegl. geod.", 1962, v. 34, no. 4, 133 - 136, Polish)

TEXT: The author describes the methods of "horizontal" and "vertical grid" proposed by N. I. Ivanov and B. S. Puzanov (RZhAstr, 1961, 9G111). On the basis of employing these methods by the photogrammetry laboratory of the Mining-Metallurgical Academy at Cracow, their high efficiency in comparison with other methods of volume determination is noted. A drawback of the "horizontal grid" method is comparative difficulty of measuring coordinates on a stereocomparator. The necessity is stressed of careful contouring the working on photographs prior to measurements on the stereocomparator. It is also emphasized that the objective of a phototheodolite should be necessarily set in the same position while

Card 1/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEK, Zbigniew, dr. inz.

Photogrammetry in the service of mining surveying in open-pit mines. Przegl. geod. 36 no.2:75-80 F'64.

1. Zaklad Fotogrametrii, Akademia Gorniczo-Hutnicza, Krakow.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITEL', B.V.

Effectiveness of health resort treatment in Kislovodsk of hypertension with a varying electrocardiogram character. Uch. zap.Pyat.gos.nauch.-issl.bal'n.inst. 3:256-279 '60. (MIRA 15:10)

(HYPERTENSION)
(ELECTROCARDIOGRAPHY)
(KISLOVODSK--HEALTH RESORTS, WATERING PLACES, ETC.)

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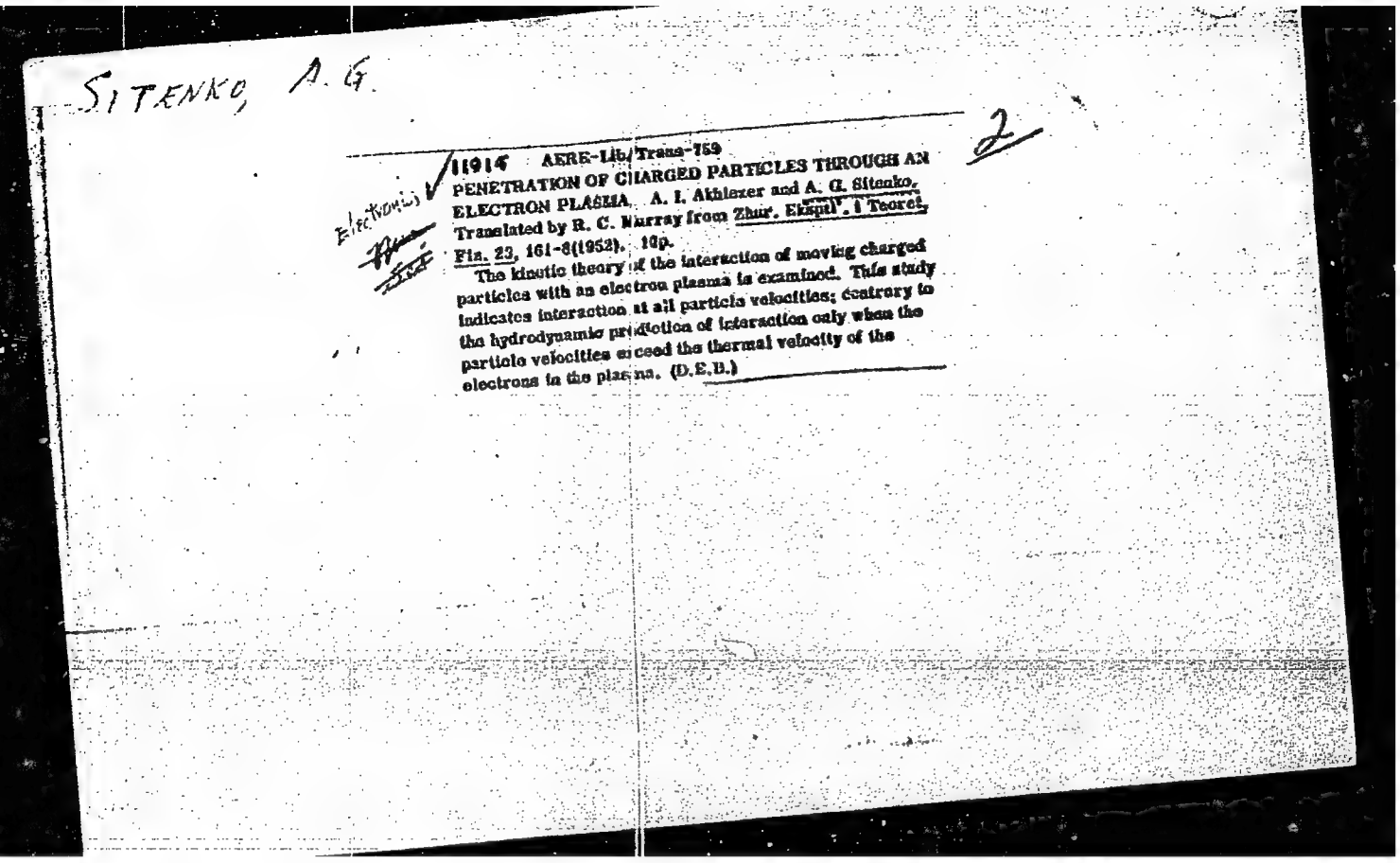

SITENKO, A. G.

Electrons

11914 AERE-Lib/Trans-759
PENETRATION OF CHARGED PARTICLES THROUGH AN ELECTRON PLASMA. A. I. Akhiezer and A. G. Sitenko. Translated by R. C. Murray from Zhur. Eksptl'. i Teoret. Fiz. 23, 161-8(1952). 10p.

The kinetic theory of the interaction of moving charged particles with an electron plasma is examined. This study indicates interaction at all particle velocities; contrary to the hydrodynamic prediction of interaction only when the particle velocities exceed the thermal velocity of the electrons in the plasma. (D.E.B.)

2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SiTenKo, A.G.

USSR/ Nuclear Physics

Card 1/1 Pub. 22 - 14/48

Authors : Sitenko, A. G.

Title : About the passing of a charged particle through a magnetic substance

Periodical : Dok. AN SSSR 98/3, 377-380, Sep 21, 1954

Abstract : The energy losses due to the ionization of the medium and the Cherenkov radiation, which take place during the passing of a charged particle through a magnetic substance, especially when the rate of the particle exceeds the phase rate of electromagnetic wave propagation, are discussed. It was established that the energy losses, due to ionization, do not depend upon the magnetic properties of the substance through which the charged particle passes and that the Cherenkov radiation is actually determined by the electrical and magnetic properties of the substance. Six references: 5-USSR and 1-USA (1935-1952).

Institution : ...

Presented by: Academician L. D. Landau, May 26, 1954

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

Sitenko A.G.

AKHIYEZER, A.I.; SITENKO, A.G.

Charge-field interactions in cavity resonators. Uch.zap. KHGU 64 no.6:5-7 '55. (MLRA 10:7)
(Electrons) (Electric fields)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

AKHIYEZER, A.I.; SITENKO, A.G.

Theory of deuteron fission reactions. Uch.zap. KHGU 64 no.6:9-12 '55. (MLRA 10:7)
(Deuterons) (Nuclear fission)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITENKO, A.G.

USSR/Nuclear Physics - Penetration of Charged and Neutral Particles Through Matter, C-6

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34096

Author: Sitenko, A. G.

Institution: Khar'kov University, Khar'kov USSR

Title: On the Penetration of a Charged Particle Through a Lossy Dielectric

Original Periodical: Uch. zap. Khar'kovsk. un-ta, 1955, 64, 17-22

Abstract: Consideration of the polarization, losses, and the Cherenkov effect when a charged particle moves through a lossy dielectric. The determination of the energy losses reduces to obtaining the field produced by the charge and to calculation of the force acting on the charge. The polarization losses are due to the interaction with the longitudinal portion of the field, occurring in the medium when the particle passes through it, and the radiation losses are due to the transverse part of the field. As a result of the attenuation of the electromagnetic oscillation in the substance, the polarization losses decrease somewhat, while the losses due to Cherenkov radiation increase. With this, the energy due to the polarization losses is absorbed by the matter directly near the trajectory of the particle, and the Cherenkov radiation is absorbed by the matter at considerably greater distances.

1 of 1

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITENKO, A.G.

USSR/Nuclear Physics - Nuclear Reactions, C-5

Abst Journal: Referat Zhur - Fizika, N. 12, 1956, 34054

Author: Akhiezer, A. I., Sitenko, A. G.

Institution: Kharkov University, Kharkov, USSR

Title: On the Theory of the Nuclear Photoeffect

Original Periodical: Uch. zap. Khar'kovsk. un-ta, 1955, 64, 67-72

Abstract: It is shown that in addition to the process of evaporation of the nucleon from the nucleus and of the photoeffect by an individual nucleon, the photonucleons can also be produced by the following mechanism: the additional nucleon interacts with the surface oscillations of the nucleus, which interact in turn with the electromagnetic wave (interaction of the quadrupole moment of the nucleus with the electromagnetic field of the wave). Using perturbation theory, the authors obtain an approximate expression for the cross section of the quadrupole photonuclear effect. The ratio of the cross section of the quadrupole transition to the cross section of the dipole transition is $\frac{\sigma^q}{\sigma^d} = \frac{1}{5}\left(\frac{Z}{A-Z}\right)^2\left(\frac{w}{w+w_2}\right)^2\left(\frac{w}{w_2}\right)^2\left(\frac{\hbar w}{Mc^2}\right)^2 A^{2/3}$, where $\hbar w$ is the

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

USSR/Nuclear Physics - Nuclear Reactions, C-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34054

Author: Akhiezer, A. I., Sitenko, A. G.

Institution: Khar'kov University, Khar'kov, USSR

Title: On the Theory of the Nuclear Photoeffect

Original Periodical: Uch. zap. Khar'kovsk. un-ta, 1955, 64, 67-72

Abstract: energy of the incident photon and $\hbar\omega_2$ is the difference between the nearest levels of the residual nucleus. If $A \sim 100$ and $\hbar\omega_2 \sim 2$-3 Mev, then at $\hbar\omega = 17.5$ Mev this ratio will be on the order of 0.1-0.05.

2 of 2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITENKO, A.G.

USSR/ Physics - Energy losses

Card 1/2 Pub. 22 -19/60

Authors : Sitenko, A. G., and Kaganov, M. I.

Title : About the energy losses by a charged particle moving in an anisotropic medium

Periodical : Dok. AN SSSR 100/4, 681-683, Feb 1, 1955

Abstract : Proof is given of the fact that systematic calculations of the energy losses of a moving charged particle, which moves in an anisotropic medium, lead to a uniform solution; for the simplest anisotropic medium the losses are expressed as follows:

$$-\frac{dE}{dz} = \frac{2\pi Ne^2q^2}{mv^2}\left\{\ln\frac{mv^2\chi_m^2}{4\pi e^2 N} + \ln\frac{\varepsilon_\perp - 1}{\varepsilon_\perp(1-\beta^2)} - \beta^2\right\}$$

Institution : Acad. of Scs., USSR, Physico-Technical Institute

Presented by: Academician L. D. Landau, October 14, 1954

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

Periodical : Dok. AN SSSR 100/4, 681-683, Feb 1, 1955

Card 2/2 : Pub. 22 - 19/60

Abstract : when $\beta < \frac{1}{\sqrt{\varepsilon_\perp}}$; $-\frac{dE}{dz} = \frac{2\pi Ne^2q^2}{mv^2}\left\{\ln\frac{mv^3\varkappa_m^2}{4\pi e^2 N} - \frac{1-\beta^2}{\varepsilon_\perp - 1}\right\}$

when $\beta > \frac{1}{\sqrt{\varepsilon_\perp}}$

These expressions are identical to those obtained by Fermi with only one variation, i.e. Fermi's ε's are replaced by $\varepsilon_\perp$'s. Five references: 4 USSR and 1 USA (1940-1953).

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITENKO, A. G. and AKHIYEZER, A. I.

"On the Diffractional Disintegration and Scattering of Fast Neutrons by Nuclei" and "Note on Nuclear Photo Effect" papers presented at the International Conference on Nuclear Reactions, Amsterdam, 2-7 July 1956.

D551274

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITENKO, A.G.

21 537.52

7437. ON PLASMA OSCILLATIONS IN AN EXTERNAL ELECTRIC FIELD. A.I.Akhiezer and A.G.Sitenko. Zh. éksper. teor. Fiz., Vol. 30, No. 1, 16-17 (1956). In Russian.

From the transport equation for the distribution function $F(\vec{r}, \vec{v}, t)$ given in the form $\partial F/\partial t + \vec{v}\,\mathrm{grad}\,F + (e/m)(\vec{E}_0 + \vec{E})\,\partial F/\partial \vec{v} + J(F) = 0$, where J = the collision integral and where $\vec{E}_0$ the electric field $\vec{E}$ is given by $\mathrm{div}\,\vec{E} = 4\pi e \int F\,d\vec{v} - 4\pi e n_0$, n_0 the average plasma density) dispersion relations are deduced for the cases of strong and weak external field $\vec{E}_0$. In the latter case the authors find

$$\omega = \Omega + k^2 s^2/2\Omega + (8/3\pi)^{1/2} \vec{E}_0 \vec{k} l/ms,$$

and in the former

$$\omega = \Omega + \tfrac{1}{3}\frac{\Gamma(\frac{5}{3})}{\Gamma(\frac{2}{3})}\frac{k^2\sigma^2}{\Omega} + \frac{1}{3}\frac{\Gamma(\frac{1}{3})}{\Gamma(\frac{2}{3})}\frac{e\vec{E}_0\vec{k}l}{m\sigma}.$$

In these formulae Ω = the plasma frequency, l = the mean free path, T = the temperature, M and m are the ion and electron masses respectively, $s = (3T/m)^{1/2}$ and $\sigma = (\frac{1}{3}M/3m)^{1/4}(e\vec{E}_0 l/m)^{1/2}$, ω = the frequency and $\vec{k}$ = the propagation vector. The collision term is approximated by an expression $1/\tau$, where τ the average time between collisions.

H.Motz

Physico-Technical Inst. Acad. Sci. Ukr. SSR
Khar'kov State University

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

CARD 1 / 2 PA - 1542

SUBJECT USSR / PHYSICS
AUTHOR SITENKO,A.G.
TITLE On the Production of Pion Pairs by -Quanta of High Energy on Nuclei.
PERIODICAL Žurn.eksp.i teor.fis,31,fasc.2,348-350 (1956)
Issued: 10 / 1956

The present report takes the influence exercised by COULOMB'S interaction of pions with the nuclear charge upon production in pairs into account. At first the matrix element of the production of a (π^+, π^-)-pair is explicitly written down. The wave functions Ψ_+ and Ψ_- of the produced mesons are a sum of a plane and a convergent wave. The functions Ψ_+ and Ψ_- are, for the purpose of convenience, subdivided into 3 summands. The formula for the matrix element is simplified because of the vanishing of several integrals (namely the integrals with respect to the product of the waves entering into Ψ_+ and Ψ_- and the integrals containing non-overlapping functions. Next, the matrix element for the case of relativistic meson energies (E_+ and $E_- \gg \mu$) and small angles between $\vec{p}_+$, $\vec{p}_-$ and $\vec{k}$ (in which case treatment as diffraction is purposeful) are explicitly written down. The differential cross section of the production in pairs is

$$d\sigma_j(E_+, \xi, \eta) = 2\pi |M^2| |F|^2 \mu^4 (2\pi)^{-6} d\xi d\eta dE_+.$$

Here it is true that $\vec{q}=(\xi+\eta)$ and the form factor F takes the finite dimensions of the particles as well as their interaction among themselves into account. This cross section is then explicitly described by the insertion of a simplified expression for M and is

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

USSR/Nuclear Physics - Nuclear Reactions, C-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34088

Author: Rozentsvayg, L. N., Sitenko, A. G.

Institution: Physico-technical Institute, Academy of Sciences Ukrainian SSR

Title: Splitting of the Relativistic Deuteron in the Electric Field of the Nucleus

Original Periodical: Zh. Eksperim. i Teor. Fiziki, 1956, 30, No 2, 427-428

Abstract: The splitting of a deuteron in the Coulomb field of the nucleus is treated with allowances for the relativistic effect. It is assumed that the interaction process between the neutron and proton are central forces with a zero radius of action, that the electric field of the nucleus terminates at $r = R_0$, equal to the sum of the radii of the nucleus and of the deuteron, and that the radius of the deuteron R_d is small compared with R_0. Using perturbation theory, the authors have found the cross section of the "electric" splitting of the deuteron $\sigma_{1\to1}$ with allowances for their relativistic corrections. It is shown that there occurs also a "magnetic" splitting of the deuteron, at which the n-p system changes from the triplet state into a singlet state. The cross section $\sigma_{1\to0}$ of such a transition is found. Numerical integration of the cross section has been carried out and curves are given, giving the dependence of the integral sections on the deuteron energy. In the extremely relativistic case $\sigma_{1\to0}$ is one order of magnitude smaller than $\sigma_{1\to1}$.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

Category : USSR / Radio Physics. Generation and Conversion of Radio Frequency Oscillations

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 7250

Author : Sitenko, A.G., Kolomenskiy, A.A.

Institut : Physical-Technical Institute, Academy of Sciences, Ukrainian SSR and Physics Institute imeni P.N. Lebedev, Academy of Sciences, USSR

Title : Motion of Charged Particles in an Optically Active Anisotropic Medium

Orig Pub : Zh. eksperim. i. teor. fiziki, 1956, 30, No 3, 511-517

Abstract : The author considers the total energy losses (without allowances for paired collisions) of a charged particle q, moving in an optically-active anisotropic medium, and also clarifies the problem of the distribution of the losses among the polarization losses and those connected with Cherenkov radiation. The determination of the field produced by the charge, and to a calculation of the force acting on the charge. A general expression is obtained for the total energy losses of a charged particle moving in an arbitrary optically-active anisotropic medium. The general expression is used to estimate the total losses in the case of a charged par-

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SITENKO, A.G.

CARD 1 / 2 PA - 1891

SUBJECT USSR / PHYSICS
AUTHOR SITENKO, A.G.
TITLE On the Theory of the Stripping Reaction.
PERIODICAL Žurn.eksp.i teor.fis, 31, fasc.4, 636-641 (1956)
Issued: 1 / 1957

By a method developed by LANDAU and LIFŠIC, Žurn.eksp.i teor.fis, 18, 750 (1948) the present paper determines the angular distribution of protons on the occasion of the reaction (d,p) in consideration of the scattering of deuteron- and proton waves in the field of the nucleus. Taking account of scattering leads to a partial polarization of the liberated protons. If the neutrons are captured by the nucleus on to a virtual level, the cross section of the stripping reaction is proportional to the breadth of the level. If the energy of the inciding deuterons is sufficiently high, the total cross section of the stripping reaction is equal to the value found by R.SERBER, Phys.Rev.72, 1008 (1947).

The SCHROEDINGER equation for the motion of the system neutron + proton in the field caused by a nucleus can be written down as follows:
$\{ T_n + T_p + V_n + V_p + V_{np} - E \} \Psi = 0$. Here T_n and T_p denote the operators of the kinetic energy of the neutron and proton respectively, V_n and V_p - the potentials of the interaction between the neutron or Proton respectively with the nucleus, V_{np} - the potential of the nuclear interaction between a neutron and a proton, E - the total energy of the system. For the solution

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of this equation the required wave function Ψ is decomposed according to the wave functions of the proton liberated on the occasion of the fission of the deuteron. The solution of the aforementioned SCHROEDINGER equation can be represented as follows: $\Psi(\vec{r}_n,\vec{r}_p) = \sum_{\vec{k}_p} a(\vec{r}_n,\vec{k}_p)\,\Psi_{\vec{k}_p}(\vec{r}_p)$. Here $a(\vec{r}_n,\vec{k}_p)$ denotes certain functions of the coordinates of the neutrons and of the wave vectors of the emitted particle. An exact equation for the determination of a is given, and a is developed according to spherical harmonics.
A general formula for the cross section of the stripping reaction (d,p) is then derived. On this occasion at first an expression for the neutron flux passing through the surface of the nucleus is given. Taking the scattering of deuteron- and proton waves into account leads to a partial polarization of the liberated protons. Far from resonance, the deuteron and the proton undergo nearly complete reflection on the boundary of the nucleus, and therefore the scattering of the waves by the nucleus may approximatively be considered to be the scattering by an impenetrable sphere of the radius R. Near resonance energy resonance scattering plays the most important part. However, near resonance the process (d,p) with production of a compound nucleus probably plays an essential part. Interference between these two processes probably causes a marked modification of the angular distribution of the products of reaction. In conclusion the case with a high energy of the inciding deuterons is studied.
INSTITUTION: Physical-Technical Institute of the Academy of Science of the Ukrainian SSR.

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SITENKO, A.G.

ZHURNAL EKSPERIMENTALNOI I TEORTICHESKOI FIZIKI

Vol 31, No 4 (10), 1956 p. 642-651

ON THE OSCILLATIONS OF AN ELECTRON PLASMA IN A MAGNETIC FIELD

A. G. Sitenko and K. N. Stepanov

The kinetic theory of electron plasma oscillations in a constant magnetic field is considered. Plasma oscillations with frequencies which are a multiple of the gyrofrequency are investigated. The refraction indices of the ordinary, extraordinary and plasma waves propagated at an arbitrary angle θ with respect to the magnetic field are determined. It is shown that at frequencies which are multiples of the gyrofrequency the plasma wave is strongly damped if $\theta < \frac{\pi}{2}$. Plasma waves with these frequencies cannot be propagated if $\theta \approx \frac{\pi}{2}$. The «gap» widths in the plasma oscillation frequency spectrum has been determined.

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SITENKO, A.G.

USSR/Nuclear Physics - Nuclear Reactions, C-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34089

Author: Akhiezer, A. I., Sitenko, A. G.

Institution: Physicotechnical Institute, Academy of Sciences Ukrainian SSR, Khar'kov University, Khar'kov, USSR

Title: On the Diffraction Scattering of Fast Deuterons by Nuclei

Original Periodical: Dokl. AN SSSR, 1956, 107, No 3, 385-388

Abstract: Diffraction scattering in the case of point particles can be investigated by an optical method, based on the Huygens principle. The authors have considered the diffraction scattering of complicated particles (deuterons) by absolutely black nuclei. The necessary generalization of the usual optical method was indicated by L. D. Landau. In the case of heavy absolutely-black nuclei without allowances for the Coulomb interaction, the cross section of the elastic scattering is $\sigma_1 = \pi R^2 + 1/3\pi(1-\ln 2)RR_d$, $R_d \ll R$, where R and R_d are the radii of the nucleus and of the deuteron. The second component represents a correction caused by the finite dimensions of the deuteron. In addition to the elastic scattering, the following reactions are possible: the stripping of the proton with absorption of the neutron, simultaneous

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

USSR/Nuclear Physics - Nuclear Reactions, G-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34089

Author: Akhiezer, A. I., Sitenko, A. G.

Institution: Physicotechnical Institute, Academy of Sciences Ukrainian SSR, Khar'kov University, Khar'kov, USSR

Title: On the Diffraction Scattering of Fast Deuterons by Nuclei

Original Periodical: Dokl. AN SSSR, 1956, 107, No 3, 385-388

Abstract: absorption of neutron and proton, and in addition, the diffraction splitting of the deuteron, in which both particles are liberated. The deuteron is a weakly coupled system; if the change in the momentum of the deuteron during the elastic scattering exceeds the momentum of the relative motion of the neutron and proton in bound state, the deuteron may split in a location remote from the nucleus. The cross section of such a diffraction splitting of the deuteron in the limiting case $R_d \ll R$ is $\sigma_f = 1/3\pi(\ln 2 + 1/2)RR_d$. Along with the stripping reaction, the diffraction splitting of the deuteron leads to the liberation of a neutron and a proton, i.e., the yield of neutrons created during interaction of fast deuterons with nuclei is increased. In the limiting case $R_d \ll R$ the total cross section of all the processes, both elastic and inelastic, which is determined by the amplitude of the elastic scattering by a zero angle, is $\sigma_t = 2\pi R^2 + \pi RR_d$. It is shown that the sum of the cross sections of the elastic scattering and the diffraction splitting of the deuteron amounts to 1/2 the total cross section. The share of the remaining processes (reaction of stripping of the neutron and proton and the absorption of both particles by the nucleon) is also $1/2\sigma_t$.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

Sitenko, O. G.

Emission of γ-quanta from the collision of fast, charged pions with nuclei. O. G. Sitenko (A. M. Gor'kiĭ State Univ., Kharkov). *Doklady Akad. Nauk S.S.S.R.* 109, 1119-22; *Soviet-Phys. "Doklady"* , 512-16(1958)(English translation).—A math. treatment is given for the case of the diffraction emission of γ-quanta in the collision of pions with nuclei, by taking into account the Coulomb reaction of the pions with the charge of the nucleus.

J. Rovtar Leach

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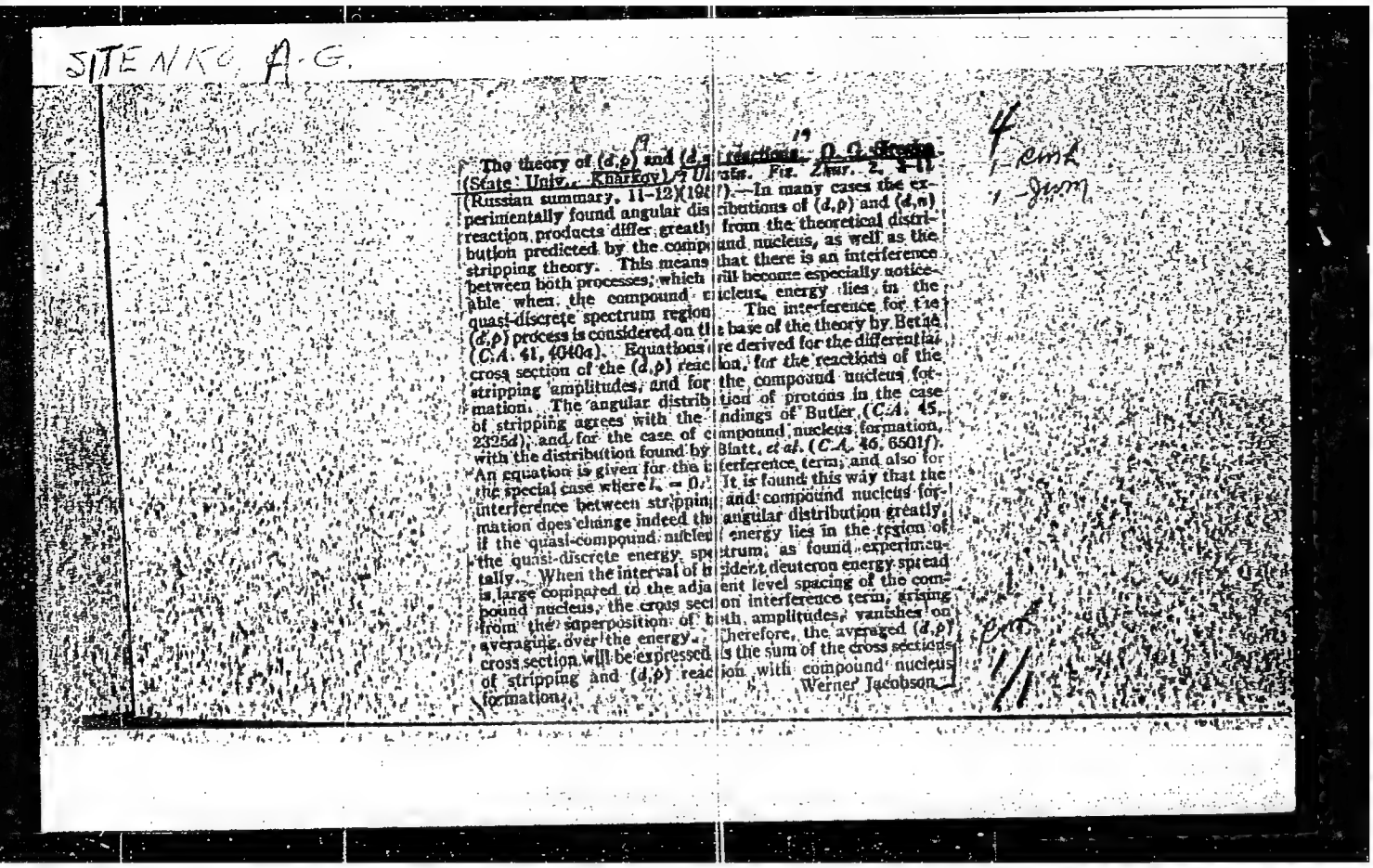

SITENKO, A.G.

9

The theory of (*d*,*p*) and (*d*,*n*) reactions. O. F. Nemets (State Univ., Kharkov). *J. Phys. (U.S.S.R.)* 9, 11–12 (1945); Russian summary, 11–12 (1945).—In many cases the experimentally found angular distributions of (*d*,*p*) and (*d*,*n*) reaction products differ greatly from the theoretical distribution predicted by the compound nucleus, as well as the stripping theory. This means that there is an interference between both processes; which will become especially noticeable when the compound nucleus energy lies in the quasi-discrete spectrum region. The interference for the (*d*,*p*) process is considered on the base of the theory by Bethe (*C.A.* 41, 4040a). Equations are derived for the differential cross section of the (*d*,*p*) reaction, for the reactions of the stripping amplitudes, and for the compound nucleus formation. The angular distribution of protons in the case of stripping agrees with the findings of Butler (*C.A.* 45, 2325d), and for the case of compound nucleus formation, with the distribution found by Blatt, *et al.* (*C.A.* 46, 6501f). An equation is given for the interference term, and also for the special case where $l_n = 0$. It is found this way that the interference between stripping and compound nucleus formation does change indeed the angular distribution greatly if the quasi-compound nucleus energy lies in the region of the quasi-discrete energy spectrum, as found experimentally. When the interval of the incident deuteron energy spread is large compared to the adjacent level spacing of the compound nucleus, the cross section interference term, arising from the superposition of both amplitudes, vanishes on averaging over the energy. Therefore, the averaged (*d*,*p*) cross section will be expressed as the sum of the cross sections of stripping and (*d*,*p*) reaction with compound nucleus formation.

Werner Jacobson

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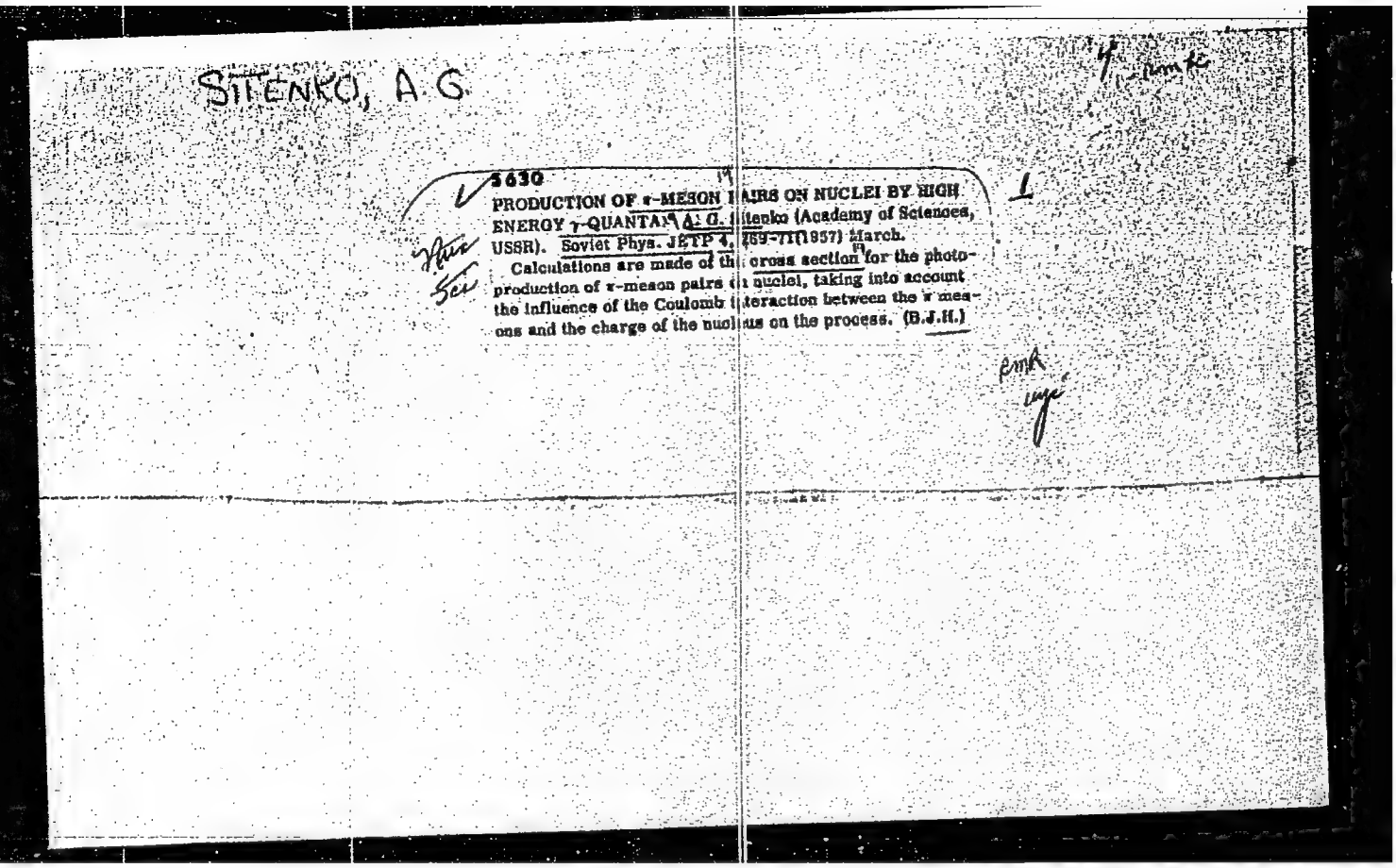

SITENKO, A. G.

γ-quanta

5630

PRODUCTION OF π-MESON PAIRS ON NUCLEI BY HIGH ENERGY γ-QUANTA. A. G. Sitenko (Academy of Sciences, USSR). Soviet Phys. JETP 4, 789-791(1957) March.

Calculations are made of the cross section for the photoproduction of π-meson pairs on nuclei, taking into account the influence of the Coulomb interaction between the π mesons and the charge of the nucleus on the process. (B.J.H.)

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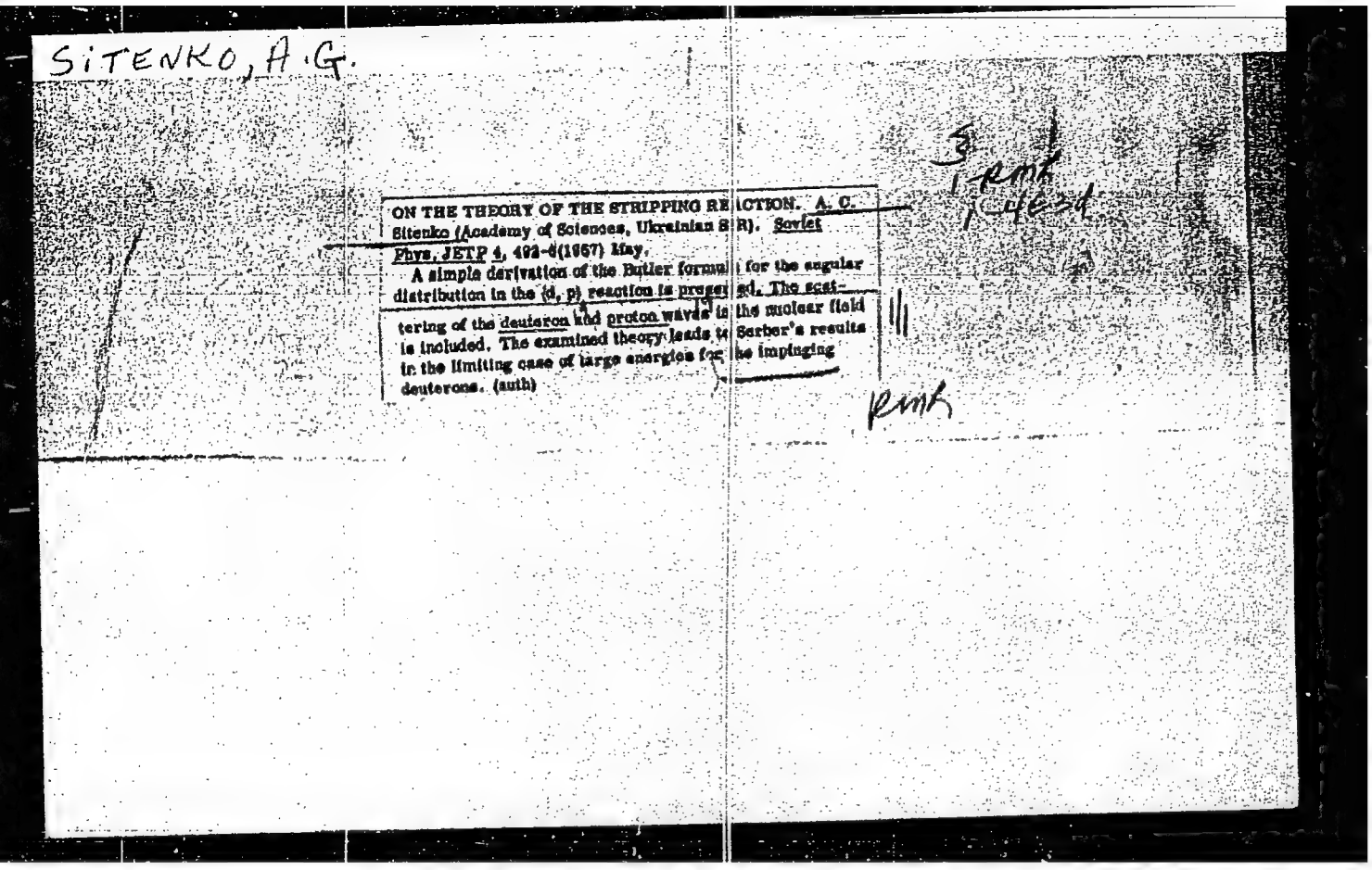

SITENKO, A.G.

3
1 Rmk
1-46-24

ON THE THEORY OF THE STRIPPING RE ACTION. A. G. Sitenko (Academy of Sciences, Ukrainian S R). Soviet Phys. JETP 4, 492-6(1957) May.

A simple derivation of the Butler formu for the angular distribution in the (d, p) reaction is prese gd. The scat-tering of the deuteron and proton waves in the nuclear field is included. The examined theory leads t Serber's results in the limiting case of large energies for he impinging deuterons. (auth)

Rmk

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

Sitenko, A. G.

USSR

Distr: 4E3d

5363. DIFFRACTION SCATTERING OF FAST DEUTERONS BY NUCLEI. A.I.Akhiezer and A.G.Sitenko. Zh. éksper. teor. Fiz., Vol. 32, No. 4, 794-80 (1957). In Russian. English translation in: Soviet Physics — JETP (New York), Vol. 5, No. 4, 652-60 (Nov., 1957).

The cross-section for elastic scattering and the cross-section for diffraction splitting of fast deuterons by completely black nuclei are determined. The energy distribution of the disintegration products is found. The cross-section for splitting of a fast deuteron by a completely black nucleus is calculated, taking the diffraction and Coulomb interactions into account. Expressions are obtained for the cross-sections for elastic deuteron scattering and splitting, taking into account the semi-transparency of the nucleus. A.

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SITENKO, A G

89-10-10/36

AUTHOR: SITENKO, A.G.

TITLE: Deuteron Dissociation on Nuclear Scattering (O rasshcheplenii deytronov pri rasseyanii na yadrakh)

PERIODICAL: Atomnaya Energiya, 1957, Vol 3, Nr 10, pp 324-325 (USSR)

ABSTRACT: The differential angular- and energy distribution of neutrons and protons which are liberated with the fission of the deuteron are theoretically derived according to formula. An integration of this equation is, however, not possible for the general case. If $f_{eff} \ll \chi$ is true, three other equations for the momentum distribution of the neutrons and protons are given.

SUBMITTED: June 6, 1957
AVAILABLE: Library of Congress

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

PA - 2697

AUTHOR SITENKO,A.G., ROZENTSVEYG,L.N.,

TITLE The Diffraction Production of Proton-Antiproton Pairs by Photons of High Energy.
(Diffraktsionnoye obrazovaniye par proton-antiproton fotonami bol'shikh energiy - Rissian)

PERIODICAL Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 2, pp 383-383 (U.S.S.R.)
Received 5/1957 Reviewed 6/1957

ABSTRCT The production of a proton-antiproton pair can be regarded as a process of first order. The matrix element of this process is given in the paper under review. The consideration is greatly simplified in the boundary case $\omega \gg 2M$ in which only the behavior of the wave functions distant from the nucleus is of importance. The wave functions form there the superposition of a plane wave and of the wave diffracted by the nucleus. ω denotes the energy of the photons, and M the mass of the protons. The paper under review gives the formula for the state of the proton with negative energy, this formula resulting from the theory of the scattering of particles with spin 1/2 by an absolutely black absorbing nucleus with the radius R. A formula is also given for the wave function of the proton in the field of the nucleus. The formula for the production cross section of a proton-antiproton pair by a black uncharged nucleus, derived for small angles between, on the one hand, the impulses $\vec{p}_+$, $\vec{p}_-$ of the produced particles and, on the other hand, the impulse $\vec{k}$ of the photon under thepremise $E \gg M$,

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

The Diffraction Production of Proton-Antiproton Pairs by Photons of High Energy. PA -2697

$\tilde{E} \gg M$, is also given explicitly. Unlike the formulae obtained in the Born approximation, we do not obtain the just mentioned expression for the production cross section from the corresponding expression for the continuous radiation of a proton at the diffraction scattering by a black nontransparent nucleus. This can be explained by the fact that in the extremely relativistic case the diffracted waves at continuous radiation do virtually not overlap, whereas they overlap strongly at pair production. If we take into consideration the dimensions of the nucleons, we obtain a certain form factor in the expression mentioned last for the cross section of production of a proton- antiproton pair. The anomalous magnetical moment of the nucleon was not taken into account by the authors of the paper under review. (No reproductions).

ASSOCIATION Physical-Technological Institute, Academy of Sciences of the Ukrainian SSR.

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SUBMITTED 15.10.1956.
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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

SITENKO, A.G.

56-4-20/52

AUTHOR AKHIYEZER, A.I., SITENKO, A.G.

TITLE On the Diffraction Scattering of Fast Deuterons By Nuclei (O diffraktsionnom rasseyanii bystrykh deytonov yadrami. Russian)

PERIODICAL Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 4, pp 794 - 805 (U.S.S.R.)

ABSTRACT The paper under review determines the cross sections of the elastic scattering and of the diffraction spallation of fast deuterons by absolutely black nuclei. It also determines the energy distribution of the spallation products. It is possible to determine the diffraction scattering of punctiform by absorbing nuclei with the aid of the optical method using the Huygens principle. In order to generalize this method for deuterons, the authors of the paper under review first of all investigate the problem of the diffraction scattering of punctiform particles by absorbing nuclei. This method of investigation permits to make the generalization for the case of the diffraction scattering of composed particles with weak coupling, e.g. of deuterons by absolutely black nuclei. In this context it is necessary to take into account the motion of the centers of mass of the deuterons as well as the relative motions of the neutron and of the proton in the deuteron. The paper under review proceeds to derive expressions for the differential and for the integral cross section of the elastic scattering and of the diffraction spallation, and also an expression for the inte-

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On the Diffraction Scattering of Fast Deuterons By Nuclei -56-4-20/52

gral cross section of the spallation. Furthermore, also reactions of the tearing-off of a neutron or of a proton as well as the absorption of both particles by a nucleus are possible, - the relevant cross sections are listed in the paper under review and discussed. Then the paper shows how the Coulomb's interaction is taken into account, - the authors proceed to compute the spallation of fast deuterons by taking into consideration of the Coulomb's interaction. For the total cross section of the spallation $\sigma_f = (4\pi/3)\, n^2 R^2_d \ln (R_d/\lambda)$, $n \gg 1$ is obtained.

(No reproduction).

ASSOCIATION Physical-Technological Institute, Academy of Sciences of the Ukrainian SSR.

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SUBMITTED 2o May 1956, after revision again submitted on 14 January 1957

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550910008-2

56-6-30/56

On the Bremsstrahlung of Ultra-Relativistic Particles in a Central Field.

The author then studies the scattering of a particle with spin 1/2 at which a γ-quantum is emitted. The differential cross section for the emission of a γ-quantum by an ultrarelativistic particle with spin 1/2 in a central symmetric field is computed. Next, a general expression for the ratio (cross section of elastic scattering / cross section of Bremsstrahlung) is determined.

ASSOCIATION: State University Khar'kov. (Khar'kovskiy gosudarstvennyy universitet, Russian)
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SUBMITTED: 19.11.1956
AVAILABLE: Library of Congress

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SITENKO, AG

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AUTHORS: Akhiyezer, A.I., Sitenko, A.G.,

TITLE: On the Theory of Evaporation Reactions at High Energies (K teorii raaktsii sryva pri vysokikh energiyakh)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 4, pp. 1040 - 1042 (USSR) (Letter to the Editor)

ABSTRACT: The effective cross section of an evaporation is theoretically dervied, when the generally made assumption $R \gg R_d$ is not valid. (R = the radius of the nucleus to be split, R_d = the radius of the deuteron). The reaction is treated in which a neutron becomes free and a proton is absorbed. The total effective cross section for the evaporation reaction is determined to

$$\sigma_n = \pi R^2 \left\{ 1 - 2 \int_0^\infty \frac{p}{\xi} \operatorname{arc\,tg} \frac{\xi}{p} \cdot \frac{J_1^2(\xi)}{\xi} d\xi \right\},$$

whereas the following was found for the absorption of a deuteron:

$$\sigma_a = 2\pi R^2 \int_0^\infty \frac{p}{\xi} \operatorname{arc\,tg} \frac{\xi}{p} \cdot \frac{J_1^2(\xi)}{\xi} d\xi.$$

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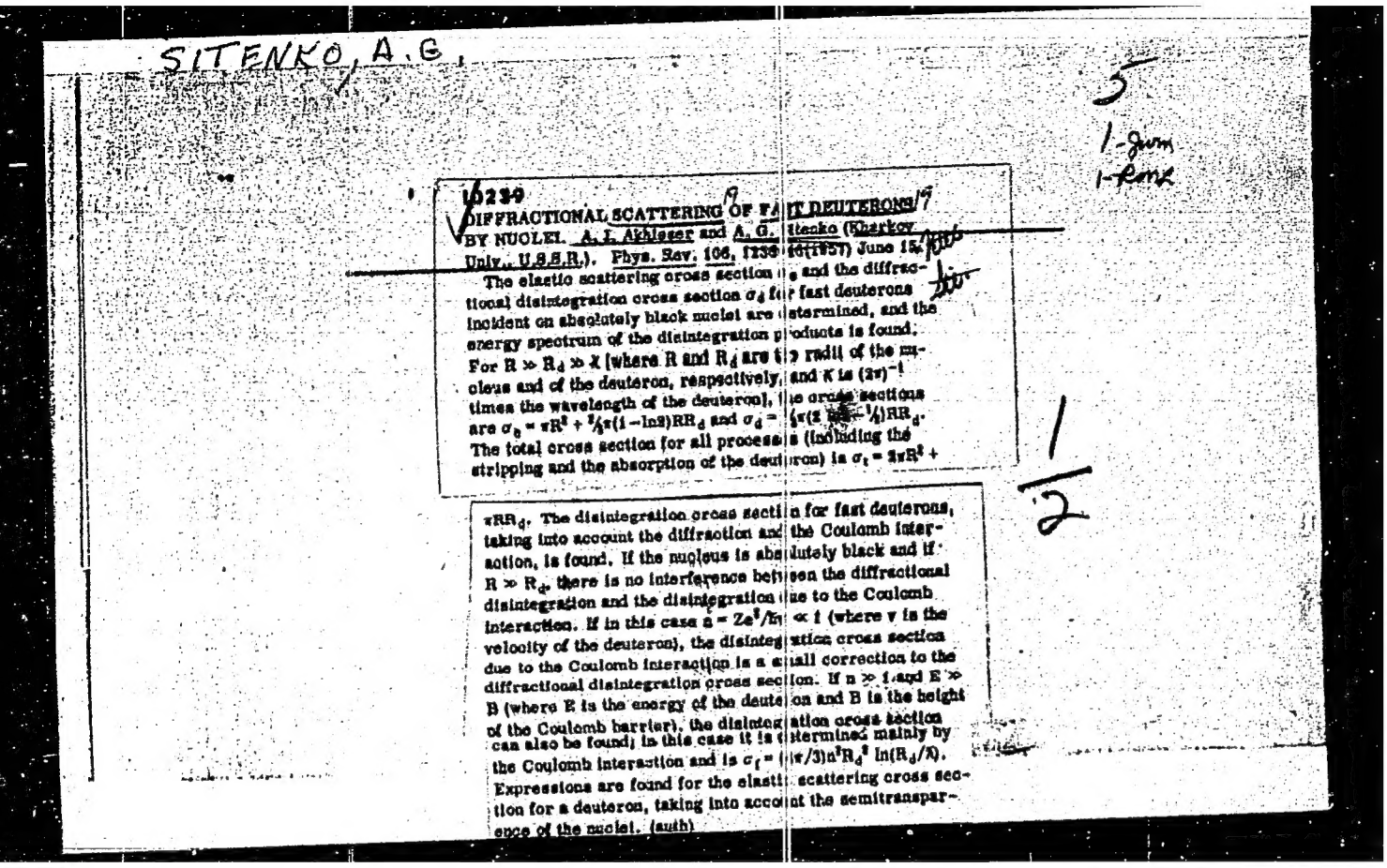

SITENKO, A.G.

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DIFFRACTIONAL SCATTERING OF FA[illegible]T DEUTERONS
BY NUCLEI. A. I. Akhiezer and A. G. [illegible]itenko (Kharkov
Univ., U.S.S.R.). Phys. Rev. 106, 1236 [illegible]6(1957) June 15.

The elastic scattering cross section [illegible]e and the diffrac-
tional disintegration cross section σ_d f[illegible]r fast deuterons
incident on absolutely black nuclei are [illegible]etermined, and the
energy spectrum of the disintegration p[illegible]oducts is found.
For $R \gg R_d \gg \lambda$ [where R and R_d are t[illegible]e radii of the nu-
cleus and of the deuteron, respectively, [illegible]and λ is $(2\pi)^{-1}$
times the wavelength of the deuteron], [illegible]e cross sections
are $\sigma_e = \pi R^2 + \frac{2}{3}\pi(1-\ln 2)RR_d$ and $\sigma_d = [illegible]\frac{1}{2})RR_d$.
The total cross section for all process[illegible]s (including the
stripping and the absorption of the deut[illegible]ron) is $\sigma_t = 2\pi R^2 +$
πRR_d. The disintegration cross secti[illegible]n for fast deuterons,
taking into account the diffraction and [illegible]the Coulomb inter-
action, is found. If the nucleus is abs[illegible]lutely black and if
$R \gg R_d$, there is no interference bet[illegible]ween the diffractional
disintegration and the disintegration [illegible]ue to the Coulomb
interaction. If in this case $a = Ze^2/\hbar[illegible] \ll 1$ (where v is the
velocity of the deuteron), the disinteg[illegible]xtion cross section
due to the Coulomb interaction is a s[illegible]all correction to the
diffractional disintegration cross sec[illegible]ion. If $n \gg 1$ and $E \gg$
B (where E is the energy of the deute[illegible]on and B is the height
of the Coulomb barrier), the disinteg[illegible]ation cross section
can also be found; in this case it is [illegible]etermined mainly by
the Coulomb interaction and is $\sigma_t = [illegible](\pi/3)n^2R_d^2 \ln(R_d/\lambda)$.
Expressions are found for the elasti[illegible] scattering cross sec-
tion for a deuteron, taking into acco[illegible]nt the semitranspar-
ence of the nuclei. (auth)

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